



PATENT  
Attorney Docket No.: AVARS-000000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

(See attached Assignment)

Serial Nos.:

60/241,450 filed 10/17/00 and 60/275,206 filed 3/12/01  
09/903,423 filed 7/10/01 and 09/923,924 filed 8/6/01  
09/903,441 filed 7/10/01 and 09/960,623 filed 9/20/01  
10/070,515 filed 7/25/05 and 10/070,339 filed 2/27/02  
10/070,338 filed 12/12/02 and 60/354,588 filed 2/4/02  
10/358,681 filed 2/4/03 and 60/409,476 filed 9/9/02  
60/411,689 filed 9/17/02 and 60/609,062 filed 9/9/04

**TRANSMITTAL LETTER**

162 North Wolfe Road  
Sunnyvale, California 94086  
(408) 530-9700

Customer Number 28960

**COPY**

Mail Stop Assignments  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed please find an Assignment and form PTO-1595 for filing with the U.S. Patent and Trademark Office. Also enclosed is a check in the amount of \$560.00 to cover the assignment recordation fee for fourteen (14) applications

The Commissioner is authorized to charge any additional fee or credit any overpayment to our Deposit Account No. 08-1275. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Respectfully submitted,  
HAVERSTOCK & OWENS LLP

Dated: January 5, 2005

By: Thomas B. Haverstock  
Thomas B. Haverstock  
Reg. No.: 32,571

Attorneys for Applicants

CERTIFICATE OF MAILING (38)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP  
Date: 1/5/05 By: [Signature]

FORM PTO-1595

(Rev. 06/93)

## RECORDATION FORM COVER SHEET

U.S. Department of Commerce

Patent and Trademark Office

OMB No. 0651-0011 (Exp. 06/94)

Attorney Docket No.: AVARS-00000

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please record the attached original documents or copy thereof.

**COPY**

1. Name of conveying party(ies):

RouteScience Technologies, Inc.

Additional name(s) of conveying party(ies) attached.

2. Name and address of receiving party(ies):

Avaya Inc.  
211 Mount Airy Road  
Basking Ridge, NJ 07920

Additional name(s) and address(es) attached.

3. Nature of conveyance:

☒ Assignment                      ☐ Merger  
☐ Security Agreement           ☐ Change of Name  
☐ Other: \_\_\_\_\_

Execution Date: December 7, 2004

4. Application number(s) or patent number(s):

☐ This document is being filed together with a new application, the execution date of the application is:☒ Patent Application Serial No.(s):

|                           |     |                          |
|---------------------------|-----|--------------------------|
| 60/241,450 filed 10/17/00 | and | 60/275,206 filed 3/12/01 |
| 09/903,423 filed 7/10/01  | and | 09/923,924 filed 8/6/01  |
| 09/903,441 filed 7/10/01  | and | 09/960,623 filed 9/20/01 |
| 10/070,515 filed 7/25/05  | and | 10/070,339 filed 2/27/02 |
| 10/070,338 filed 12/12/02 | and | 60/354,588 filed 2/4/02  |
| 10/358,681 filed 2/4/03   | and | 60/409,476 filed 9/9/02  |
| 60/411,689 filed 9/17/02  | and | 60/609,062 filed 9/9/04  |

☐ Patent No.(s):☐ Additional numbers attached.

5. Name and address of party to whom correspondence concerning document should be mailed:

Thomas B. Haverstock  
HAVERSTOCK & OWENS LLP  
162 North Wolfe Road  
Sunnyvale, CA 94086

6. Total number of applications and patents involved: 1

7. Total fee(s) [37 CFR §§ 1.21(h) and 3.41]:

☒ Check(s) in the amount of \$560.00 enclosed.

8. Authorization to Charge Additional Fees:

☒ The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication and which may be required under 37 CFR §§ 1.21(h) and 3.41 to Deposit Account No. 08-1275.

9. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Dated: January 5, 2005Signature: Thomas B. HaverstockName: Thomas B. HaverstockReg. No.: 32,571Total number of pages including cover sheet, attachments, and document: 15

EXHIBIT D  
PATENT ASSIGNMENT

**COPY**

THIS PATENT ASSIGNMENT (this "Assignment"), effective as of December 7, 2004 (the "Effective Date"), is by and between RouteScience Technologies, Inc., a Delaware corporation doing business at 159 Second Avenue, San Mateo, CA 94401 ("Assignor"), and Avaya Technology Corp., a Delaware corporation, with offices at 211 Mount Airy Road, Basking Ridge, New Jersey 07920, United States of America ("Assignee").

RECITALS

WHEREAS, Assignor presently owns or controls certain patents, patent applications, and invention submissions listed in the attached Schedule A (hereinafter "Transferred Patents");

WHEREAS, Assignor and Assignee's parent company, Avaya Inc., a Delaware corporation, with offices at 211 Mount Airy Road, Basking Ridge, New Jersey 07920, United States of America ("Avaya"), are parties to that certain Agreement for the Purchase and Sale of Assets, dated as of December 7, 2004, by and between Assignor, as seller, and Avaya, as buyer (the "Purchase Agreement"); and

WHEREAS, pursuant to the Purchase Agreement, Assignor desires to transfer, assign, convey, deliver and vest all of its interests and rights in Transferred Patents for all countries, jurisdictions and political entities of the world, to and in Assignee.

NOW, THEREFORE, in consideration of the premises and for other good and valid consideration, the receipt and sufficiency of which are hereby acknowledged, the parties, intending to be legally bound, agree as follows:

Assignor does hereby assign, convey, transfer and deliver, and agrees to assign, convey, transfer and deliver to Assignee, its successors, assigns and legal representatives or nominees, Assignor's entire right, title and interest, for all countries, jurisdictions and political entities of the world, along with the right to sue for past infringement, to all Transferred Patents and corresponding counterpart foreign patents and patent applications, with respect to which, and to the extent to which, Assignor now has or hereafter acquires the right to so assign, convey, transfer and deliver.

From time to time following the date hereof, Assignor shall execute and deliver, or cause to be executed and delivered, to Assignee, such additional instruments of conveyance and transfer as Assignee may reasonably request or as may be otherwise necessary to more effectively convey or transfer to and vest in Assignee, its successors, assigns and legal representatives or nominees; the Transferred Patents, and shall do any acts which may be necessary, desirable or convenient for claiming said rights and for securing and maintaining patents for said inventions in any and all countries and for vesting title thereto in Assignee, its successors, assigns and legal representatives or nominees.

**COPY**

IN WITNESS WHEREOF, the parties have caused this PATENT ASSIGNMENT  
to be executed by their duly authorized representatives as of the Effective Date.

**ROUTESCIENCE TECHNOLOGIES, INC.**

By: 

Name: Mark Lazar

Title: Chief Executive Officer

**AVAYA TECHNOLOGY CORP.**

By: \_\_\_\_\_

Name: Marc Foodman

Title: Chairman and President

# COPY

IN WITNESS WHEREOF, the parties have caused this PATENT ASSIGNMENT  
to be executed by their duly authorized representatives as of the Effective Date.

**ROUTESCENCE TECHNOLOGIES, INC.**

By: \_\_\_\_\_  
Name: Mark Lazar  
Title: Chief Executive Officer

**AVAYA TECHNOLOGY CORP.**

By: \_\_\_\_\_  
Name: Marc Foodman  
Title: Chairman and President

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**COPY**

ACKNOWLEDGMENTS

STATE OF CALIFORNIA )

: ss:

COUNTY OF Santa Clara)

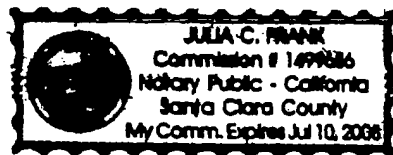
I CERTIFY that on December 7, 2004, Mark Lazar personally came before me Julia C. Frank and this person acknowledged under oath, to my satisfaction that:

a.) this person signed, sealed and delivered the attached Patent Assignment as Chief Executive Officer of RouteScience Technologies, Inc.; and

b.) this Patent Assignment was signed and made by RouteScience Technologies, Inc. as its voluntary act and deed by virtue of authority from its Board of Directors.

Julia C. Frank  
Notary Public

[Notarial Seal]



**BEST AVAILABLE COPY**

STATE OF NEW JERSEY )

**COPY**

: ss:

COUNTY OF SOMERSET )

I CERTIFY that on December 1<sup>st</sup>, 2004, Marc Foodman personally came before me and this person acknowledged under oath, to my satisfaction that:

a.) this person signed, sealed and delivered the attached Patent Assignment as Chairman and President of Avaya Technology Corp.; and

b.) this Patent Assignment was signed and made by Avaya Technology Corp. as its voluntary act and deed by virtue of authority from its Board of Directors.

Samuel A. B. B.

Notary Public

[Notarial Seal]

**NOTARIAL SEAL**  
**Samuel A. B. B.**  
**Notary Public**  
**State of New Jersey**

**BEST AVAILABLE COPY**

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## SCHEDULE A

### TRANSFERRED PATENTS

| Docket No. | Application Country | Application Date | Application Number | Inventor Name  | Title  | Priority Country | Priority Date  | Priority Number  |
|------------|---------------------|------------------|--------------------|--|--|------------------|--|--|
| 4717-701   | US                  | 17-Oct-2000      | 60/241,450         | BALDONADO, OMAR C.; FINN, SEAN P.; LLOYD, MICHAEL A.; McGUIRE, JAMES G.; MADAN, HERBERT S.   | US (PRO) APPLICATION-AWARE PERFORMANCE-BASED ROUTING ACROSS MULTIPLE PROVIDERS                   | /A               | N/A  | N/A  |
| 4717-703   | US                  | 12-Mar-2001      | 60/275,206         | BALDONADO, OMAR C.; FINN, SEAN P.; LEDDY, JOHN; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.                                | US (PRO) SYSTEMS AND METHODS FOR OPTIMIZING ROUTES FOR NETWORK TRAFFIC                           | /A               | N/A  | N/A  |
| 4717-705   | US                  | 10-Jul-2001      | 09/903,441         | LEDY, JOHN; LLOYD, MICHAEL A.; FINN, SEAN P.; McGUIRE, JAMES G.; BALDONADO, OMAR C.; MADAN, HERBERT S.                                 | ROUTING INFORMATION EXCHANGE   | S                | 17-Oct-2000<br>12-Mar-2001   | 60/241,450<br>60/275,206   |
| 4717-706   | US                  | 06-Aug-2001      | 09/923,924         | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P. | METHOD AND APPARATUS FOR PERFORMANCE AND COST OPTIMIZATION IN AN INTERNETWORK                    | S                | 17-Oct-2000<br>12-Mar-2001<br>10-Jul-2001<br>10-Jul-2001               | 60/241,450<br>60/275,206<br>09/903,441<br>09/903,423               |
| 4717-707   | US                  | 10-Jul-2001      | 09/903,423         | LLOYD, MICHAEL A.; FINN, SEAN P.; BALDONADO, OMAR C.; KARAM, MANSOUR; SIDDIQI, FAISAL; McGUIRE, JAMES G.; MADAN, HERBERT S.            | SYSTEMS AND METHODS FOR ROBUST, REAL-TIME MEASUREMENT OF NETWORK PERFORMANCE                     | S                | 17-Oct-2000<br>12-Mar-2001   | 60/241,450<br>60/275,206   |
| 4717-708   | US                  | 20-Sep-2001      | 09/960,623         | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P. | METHOD AND APPARATUS FOR COORDINATING ROUTING PARAMETERS VIA A BACK-CHANNEL COMMUNICATION MEDIUM | S                | 17-Oct-2000<br>12-Mar-2001<br>10-Jul-2001<br>10-Jul-2001<br>6-Aug-2001 | 60/241,450<br>60/275,206<br>09/903,441<br>09/903,423<br>09/923,924 |



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| Docket No. | Application Country | Application Date | Application Number | Inventor Name  | Title  | Priority Country | Priority Date | Priority Number |
|------------|---------------------|------------------|--------------------|--|--|------------------|---------------|-----------------|
| 4717-709   | PCT                 | 04-Oct-2001      | PCT US01/31419     | LEDDY, JOHN; LLOYD, MICHAEL A.; FINN, SEAN P.; McGUIRE, JAMES G.; BALDONADO, OMAR C.; MADAN, HERBERT S.                                | PCT - ROUTING INFORMATION EXCHANGE   | S                | 10-Jul-2001   | 09 /903,441     |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60 /275,206     |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60 /241,450     |
| 4717-710   | PCT                 | 04-Oct-2001      | PCT US01/31420     | LLOYD, MICHAEL A.; FINN, SEAN P.; BALDONADO, OMAR C.; KARAM, MANSOUR; SIDDIQI, FAISAL; McGUIRE, JAMES G.; MADAN, HERBERT S.            | PCT - SYSTEMS AND METHODS FOR ROBUST, REAL-TIME MEASUREMENT OF NETWORK PERFORMANCE                     | S                | 10-Jul-2001   | 09 /903,423     |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60 /275,206     |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60 /241,450     |
| 4717-711   | PCT                 | 05-Oct-2001      | PCT US01/31259     | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P. | PCT - METHOD AND APPARATUS FOR COORDINATING ROUTING PARAMETERS VIA A BACK-CHANNEL COMMUNICATION MEDIUM | S                | 20-Sep-2001   | 09 /960,623     |
|            |                     |                  |                    |  |  |                  | 6-Aug-2001    | 09 /923,924     |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09 /903,441     |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09 /903,423     |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60 /275,206     |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60 /241,450     |
| 4717-712   | PCT                 | 17-Oct-2001      | PCT US01/32312     | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P. | PCT - METHOD AND APPARATUS FOR PERFORMANCE AND COST OPTIMIZATION IN AN INTERNETWORK                    | S                | 6-Aug-2001    | 09 /923,924     |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09 /903,441     |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09 /903,423     |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60 /275,206     |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60 /241,450     |

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| Docket No. | Application Country | Application Date | Application Number | Inventor Name  | Title   | Priority Country | Priority Date | Priority Number |
|------------|---------------------|------------------|--------------------|--|---|------------------|---------------|-----------------|
| 4717-713   | PCT                 | 17-Oct-2001      | PCT US01/32319     | LLOYD, MICHAEL A.; BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; McGUIRE, JAMES G.; MADAN, HERBERT S.   | PCT - METHOD AND APPARATUS FOR THE ASSESSMENT AND OPTIMIZATION OF NETWORK TRAFFIC | S                | 20-Sep-2001   | 09/960,623      |
|            |                     |                  |                    |  |   |                  | 6-Aug-2001    | 09/923,924      |
|            |                     |                  |                    |  |   |                  | 10-Jul-2001   | 09/903,441      |
|            |                     |                  |                    |  |   |                  | 10-Jul-2001   | 09/903,423      |
|            |                     |                  |                    |  |   |                  | 12-Mar-2001   | 60/275,206      |
|            |                     |                  |                    |  |   |                  | 17-Oct-2000   | 60/241,450      |
| 4717-714   | PCT                 | 17-Oct-2001      | PCT US01/32476     | KARAM, MANSOUR J.; LLOYD, MICHAEL A.; BALDONADO, OMAR C.; FINN, SEAN P.; McGUIRE, JAMES G.; MADAN, HERBERT S.  | PCT - METHOD AND APPARATUS FOR CHARACTERIZING THE QUALITY OF A NETWORK PATH       | S                | 20-Sep-2001   | 09/960,623      |
|            |                     |                  |                    |  |   |                  | 6-Aug-2001    | 09/923,924      |
|            |                     |                  |                    |  |   |                  | 10-Jul-2001   | 09/903,441      |
|            |                     |                  |                    |  |   |                  | 10-Jul-2001   | 09/903,423      |
|            |                     |                  |                    |  |   |                  | 12-Mar-2001   | 60/275,206      |
|            |                     |                  |                    |  |   |                  | 17-Oct-2000   | 60/241,450      |
| 4717-715   | PCT                 | 17-Oct-2001      | PCT US01/32309     | FEICK, WAYNE ALLEN; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P.; BALDONADO, OMAR C. | PCT - METHOD AND APPARATUS FOR COMMUNICATING DATA WITHIN MEASUREMENT TRAFFIC      | S                | 20-Sep-2001   | 09/960,623      |
|            |                     |                  |                    |  |   |                  | 6-Aug-2001    | 09/923,924      |
|            |                     |                  |                    |  |   |                  | 10-Jul-2001   | 09/903,441      |
|            |                     |                  |                    |  |   |                  | 10-Jul-2001   | 09/903,423      |
|            |                     |                  |                    |  |   |                  | 12-Mar-2001   | 60/275,206      |
|            |                     |                  |                    |  |   |                  | 17-Oct-2000   | 60/241,450      |

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| Docket No. | Application Country | Application Date | Application Number | Inventor Name  | Title   | Priority Country | Priority Date   | Priority Number  |
|------------|---------------------|------------------|--------------------|--|---|------------------|---|--|
| 4717-716   | US                  | 04-Feb-2002      | 60/354,588         | LLOYD, MICHAEL A.; KARAM, MANSOUR; VILLAYERDE, JOSE-MIGUEL P.; FINN, SEAN P.; BALDONADO, OMAR C.; McGUIRE, JAMES G.; MADAN, HERBERT S. | US (PRO) METHOD AND APPARATUS FOR COST OPTIMIZATION OF NETWORK TRAFFIC      | /A               | N/A   | A N/A  |
| 4717-717   | US                  | 25-Jul-2002      | 10/070,515         | LLOYD, MICHAEL A.; BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; McGUIRE, JAMES G.; MADAN, HERBERT S.                             | METHOD AND APPARATUS FOR THE ASSESSMENT AND OPTIMIZATION OF NETWORK TRAFFIC | CT/US            | 17-Oct-2001<br>20-Sep-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000                | P<br>CT/US01/32319<br>09/960,623<br>09/923,924<br>09/903,441<br>09/903,423<br>60/275,206<br>60/241,450                       |
| 4717-718   | US                  | 27-Feb-2002      | 10/070,338         | LLOYD, MICHAEL A.; BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; McGUIRE, JAMES G.; MADAN, HERBERT S.                             | US - METHOD AND APPARATUS FOR CHARACTERIZING THE QUALITY OF A NETWORK PATH  | CT/US            | 17-Oct-2001<br>17-Oct-2001<br>20-Sep-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US01/32476<br>P<br>CT/US01/32312<br>09/960,623<br>09/923,924<br>09/903,441<br>09/903,423<br>60/275,206<br>60/241,450 |

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| Docket No.   | Application Country | Application Date | Application Number | Inventor Name  | Title   | Priority Country | Priority Date   | Priority Number  |
|--------------|---------------------|------------------|--------------------|--|---|------------------|---|--|
| 4717-719     | US                  | 27-Feb-2002      | 10/070,339         | FEICK, WAYNE;<br>VILLAVARDE, JOSE-MIGUEL P.;<br>LLOYD, MICHAEL A.;<br>BALDONADO, OMAR C.; FINN,<br>SEAN P.; KARAM, MANSOUR;<br>McGUIRE, JAMES G.; MADAN,<br>HERBERT S.   | US - METHOD AND<br>APPARATUS FOR<br>COMMUNICATING DATA<br>WITHIN MEASUREMENT<br>TRAFFIC | CT/US            | 17-Oct-2001<br>17-Oct-2001<br>20-Sep-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US01/32<br>476<br>P<br>CT/US01/32<br>312<br>09<br>/960,623<br>09<br>/923,924<br>09<br>/903,441<br>09<br>/903,423<br>60<br>/275,206<br>60<br>/241,450 |
| 4717-720     | US                  | 09-Sep-2002      | 60/409,476         | LLOYD, MICHAEL A.;<br>KARAM, MANSOUR;<br>VILLAVARDE, JOSE-MIGUEL P.;<br>FINN, SEAN P.; BALDONADO,<br>OMAR C.; McGUIRE, JAMES G.;<br>MADAN, HERBERT S.; GOTTLIEB,<br>ANDY | US (PRO) - CLOSED-<br>LOOP LOAD OPTIMIZATION  | /A               | N/A   | N/A<br>A   |
| 4717-721     | US                  | 17-Sep-2002      | 60/411,689         | MCAHON, DAVID;<br>LEDDY, JOHN; SIDDIQI, FAISAL<br>Z.; McGUIRE, JAMES G.;<br>BALDONADO, OMAR C.; MADAN,<br>HERBERT S.; LLOYD, MICHAEL<br>A.; FINN, SEAN P.                | US (PRO) - METHOD<br>TO QUICKLY PARTITION<br>NETWORKS FOR FURTHER<br>ANALYSIS           | /A               | N/A   | N/A<br>A   |
| 4717-722.701 | CA                  | 04-Feb-2003      | 2,474,501          | LLOYD, MICHAEL A.;<br>KARAM, MANSOUR;<br>VILLAVARDE, JOSE-MIGUEL P.;<br>FINN, SEAN P.; BALDONADO,<br>OMAR C.; McGUIRE, JAMES G.;<br>MADAN, HERBERT S.                    | LOAD<br>OPTIMIZATION  | S/PCT            | 4-Feb-2003<br>4-Feb-2002  | P<br>CT/US03/03<br>297<br>60<br>/354,588   |
| 4717-722.611 | EP                  | 04-Feb-2003      | 3710842.0          | LLOYD, MICHAEL A.;<br>KARAM, MANSOUR;<br>VILLAVARDE, JOSE-MIGUEL P.;<br>FINN, SEAN P.; BALDONADO,<br>OMAR C.; McGUIRE, JAMES G.;<br>MADAN, HERBERT S.                    | LOAD<br>OPTIMIZATION  | S/PCT            | 4-Feb-2003<br>4-Feb-2002  | P<br>CT/US03/03<br>297<br>60<br>/354,588   |

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| Docket No.   | Application Country | Application Date | Application Number | Inventor Name   | Title  | Priority Country | Priority Date   | Priority Number  |
|--------------|---------------------|------------------|--------------------|---|--|------------------|---|--|
| 4717-722.731 | IL                  | 04-Feb-2003      | 163148             | LLOYD, MICHAEL A.; KARAM, MANSOUR; VILLVERDE, JOSE-MIGUEL P.; FINN, SEAN P.; BALDONADO, OMAR C.; McGUIRE, JAMES G.; MADAN, HERBERT S. | LOAD OPTIMIZATION  | S/PCT            | 4-Feb-2003<br>4-Feb-2002  | P<br>CT/US03/03297<br>60<br>/354,588   |
| 4717.722     | PCT                 | 04-Feb-2003      | PCT US03/03297     | LLOYD, MICHAEL A.; KARAM, MANSOUR; VILLVERDE, JOSE-MIGUEL P.; FINN, SEAN P.; BALDONADO, OMAR C.; McGUIRE, JAMES G.; MADAN, HERBERT S. | LOAD OPTIMIZATION  | S                | 4-Feb-2002  | 60<br>/354,588   |
| 4717-723     | US                  | 04-Feb-2003      | 10/358,681         | LLOYD, MICHAEL A.; KARAM, MANSOUR; PULIDO, JOSE-MIGUEL; FINN, SEAN P.; BALDONADO, OMAR C.; McGUIRE, JAMES G.; MADAN, HERBERT S.       | LOAD OPTIMIZATION  | S/PCT            | 4-Feb-2003<br>4-Feb-2002<br>20-Sep-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US03/03297<br>60<br>/354,588<br>09<br>/960,623<br>09<br>/923,924<br>09<br>/903,441<br>09<br>/903,423<br>60<br>/275,206<br>60<br>/241,450 |
| 4717-724     | CA                  | 17-Oct-2001      | 2424675            | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLVERDE, JOSE-MIGUEL P. | CA - METHOD AND APPARATUS FOR PERFORMANCE AND COST OPTIMIZATION IN AN INTERNETWORK | CT/US            | 17-Oct-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000                             | P<br>CT/US01/32312<br>09<br>/923,924<br>09<br>/903,441<br>09<br>/903,423<br>60<br>/275,206<br>60<br>/241,450                                     |

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| Docket No. | Application Country | Application Date | Application Number | Inventor Name  | Title  | Priority Country | Priority Date | Priority Number     |
|------------|---------------------|------------------|--------------------|--|--|------------------|---------------|---------------------|
| 4717-725   | EP                  | 17-Oct-2001      | 1981 657.8         | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P. | EP - METHOD AND APPARATUS FOR PERFORMANCE AND COST OPTIMIZATION IN AN INTERNETWORK | CT/US            | 17-Oct-2001   | P<br>CT/US01/32 312 |
|            |                     |                  |                    |  |  |                  | 6-Aug-2001    | 09<br>/923,924      |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09<br>/903,441      |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09<br>/903,423      |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60<br>/275,206      |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60<br>/241,450      |
| 4717-726   | IL                  | 17-Oct-2001      | 1553 55            | BALDONADO, OMAR C.; FINN, SEAN P.; KARAM, MANSOUR; LLOYD, MICHAEL A.; MADAN, HERBERT S.; McGUIRE, JAMES G.; VILLAVARDE, JOSE-MIGUEL P. | IL - METHOD AND APPARATUS FOR PERFORMANCE AND COST OPTIMIZATION IN AN INTERNETWORK | CT/US            | 17-Oct-2001   | P<br>CT/US01/32 312 |
|            |                     |                  |                    |  |  |                  | 6-Aug-2001    | 09<br>/923,924      |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09<br>/903,441      |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09<br>/903,423      |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60<br>/275,206      |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60<br>/241,450      |
| 4717-727   | CA                  | 17-Oct-2001      | 2424 680           | LLOYD, MICHAEL A.; FINN, SEAN P.; KARAM, MANSOUR; BALDONADO, OMAR C.; MADAN, HERBERT S.; McGUIRE, JAMES G.                             | CA - METHOD AND APPARATUS FOR THE ASSESSMENT AND OPTIMIZATION OF NETWORK TRAFFIC   | CT/US            | 17-Oct-2001   | P<br>CT/US01/32 319 |
|            |                     |                  |                    |  |  |                  | 20-Sep-2001   | 09<br>/960,623      |
|            |                     |                  |                    |  |  |                  | 6-Aug-2001    | 09<br>/923,924      |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09<br>/903,441      |
|            |                     |                  |                    |  |  |                  | 10-Jul-2001   | 09<br>/903,423      |
|            |                     |                  |                    |  |  |                  | 12-Mar-2001   | 60<br>/275,206      |
|            |                     |                  |                    |  |  |                  | 17-Oct-2000   | 60<br>/241,450      |

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| Docket No. | Application Country | Application Date | Application Number | Inventor Name  | Title  | Priority Country | Priority Date  | Priority Number  |
|------------|---------------------|------------------|--------------------|--|--|------------------|--|--|
| 4717-728   | EP                  | 17-Oct-2001      | 1979 856           | LLOYD, MICHAEL A.;<br>FINN, SEAN P.; KARAM,<br>MANSOUR; BALDONADO, OMAR<br>C.; MADAN, HERBERT S.;<br>McGUIRE, JAMES G.                     | METHOD AND<br>APPARATUS FOR THE<br>ASSESSMENT AND<br>OPTIMIZATION OF NETWORK<br>TRAFFIC      | CT/US            | 17-Oct-2001<br>20-Sep-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US01/32<br>319<br>09<br>/960,623<br>09<br>/923,924<br>09<br>/903,441<br>09<br>/903,423<br>60<br>/275,206<br>60<br>/241,450 |
| 4717-729   | IL                  | 17-Oct-2001      | 1553 56            | LLOYD, MICHAEL A.;<br>FINN, SEAN P.; KARAM,<br>MANSOUR; BALDONADO, OMAR<br>C.; MADAN, HERBERT S.;<br>McGUIRE, JAMES G.                     | IL - METHOD AND<br>APPARATUS FOR THE<br>ASSESSMENT AND<br>OPTIMIZATION OF NETWORK<br>TRAFFIC | CT/US            | 17-Oct-2001<br>20-Sep-2001<br>6-Aug-2001<br>10-Jul-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US01/32<br>319<br>09<br>/960,623<br>09<br>/923,924<br>09<br>/903,441<br>09<br>/903,423<br>60<br>/275,206<br>60<br>/241,450 |
| 4717-730   | CA                  | 04-Oct-2001      | 2424 654           | LLOYD, MICHAEL A.;<br>FINN, SEAN P.; KARAM,<br>MANSOUR; BALDONADO, OMAR<br>C.; MADAN, HERBERT S.;<br>McGUIRE, JAMES G.; SIDDIQI,<br>FAISAL | SYSTEMS AND<br>METHODS FOR ROBUST,<br>REAL-TIME MEASUREMENT<br>OF NETWORK PERFORMANCE        | CT/US            | 4-Oct-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000  | P<br>CT/US01/31<br>420<br>09<br>/903,423<br>60<br>/275,206<br>60<br>/241,450   |

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| Docket No. | Application Country | Application Date | Application Number | Inventor Name   | Title   | Priority Country | Priority Date   | Priority Number  |
|------------|---------------------|------------------|--------------------|---|---|------------------|---|--|
| 4717-731   | EP                  | 04-Oct-2001      | 1979 572.3         | LLOYD, MICHAEL A.; FINN, SEAN P.; KARAM, MANSOUR; BALDONADO, OMAR C.; MADAN, HERBERT S.; McGUIRE, JAMES G.; SIDDIQI, FAISAL | SYSTEMS AND METHODS FOR ROBUST, REAL-TIME MEASUREMENT OF NETWORK PERFORMANCE      | CT/US            | 4-Oct-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US01/31420<br>09/903,423<br>60/275,206<br>60/241,450 |
| 4717-732   | IL                  | 04-Oct-2001      | 1553 54            | LLOYD, MICHAEL A.; FINN, SEAN P.; KARAM, MANSOUR; BALDONADO, OMAR C.; MADAN, HERBERT S.; McGUIRE, JAMES G.; SIDDIQI, FAISAL | IL - SYSTEMS AND METHODS FOR ROBUST, REAL-TIME MEASUREMENT OF NETWORK PERFORMANCE | CT/US            | 4-Oct-2001<br>10-Jul-2001<br>12-Mar-2001<br>17-Oct-2000 | P<br>CT/US01/31420<br>09/903,423<br>60/275,206<br>60/241,450 |
| 4717-733   | US                  | 09-Sep-2004      | 60/6 09,062        | LLOYD, MICHAEL A.; KARAM, MANSOUR; FRAVAL, PIERRE; FINN, SEAN P.; McGUIRE, JAMES G.; BALDONADO, OMAR C.                     | METHODS AND SYSTEMS FOR REMOTE OUTBOUND CONTROL, SECURITY STRAWMAN                | /A               | N/A   | N/A<br>A   |